EXHIBIT B18

Session Late Breaking Poster Session

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LB-044 - Talcum Powder Enhances Cancer Antigen 125 Levels in Ovarian Cancer Cells and in Normal Ovarian Epithelial Cells

March 10, 2018, 9:30 AM - 11:30 AM Sapphire C - P

Categories
6.0 - Gynecologic Oncology

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CA-125,talc,epithelial ovarian cancer

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Abstract

Introduction: We have previously characterized epithelial ovarian cancer (EOC) cells to manifest a persistent pro-oxidant state as evident by the upregulation of certain key oxidant and downregulation of key antioxidant enzymes. Cancer antigen 125 (CA-125) is a protein produced on the surface of cells which is released into the blood stream. It is currently approved by the FDA to monitor the effectiveness of treatment for ovarian cancer and for detecting disease recurrence after treatment. CA-125 levels are elevated in more than 80% of women with advanced ovarian cancers, and in 50% of women with early stage cancers however, it's also elevated in benign conditions, such as diverticulitis, endometriosis, liver cirrhosis, pregnancy, and uterine fibroids. Several studies have suggested a possible association between genital use of talcum powder and risk of EOC; however, the biologic basis for this association has yet to be delineated. The objective of this study was to determine the effects of talcum powder on the CA-125 levels in EOC cells and normal ovarian epithelial cells.

Methods: EOC cell lines (OV-90 and TOV-21G) were obtained from ATCC. Human primary normal ovarian epithelial cells were obtained from Cell Biologics. Cells were treated with or without 1000 µg/ml of talc (Sigma Aldrich) for 72 hrs. Levels of CA-125 were determined in cell culture media using an ELISA. Data was analyzed with paired t-tests.

Results: There was a 1.4 ± 0.5 and 4.4 ± 0.5 fold increase in CA-125 levels in the talc treated OV90 and TOV-21G EOC cell lines, respectively, as compared to control. Similarly, there was a 1.7 ± 0.5 fold increase in CA-125 levels in normal ovarian epithelial cells as compared to control.

Conclusion: Talcum powder induces a biological effect by further enhancing CA-125 levels in ovarian cancer cells as well as in normal ovarian epithelial cells. This will provide a molecular basis to previous reports that link genital use of talcum powder to increased risk of epithelial ovarian cancer.